

REMARKS

The present application claims are being rejected as being anticipated by the Byrne reference. Applicant submits that the Byrne reference does not disclose or teach claim limitations of the claimed invention, and therefore it can not be an anticipatory reference. In order to expedite the proceedings with respect to this application, Applicant has cancelled claims 7, 8 and 12. For the following reasons, Applicant submits the remaining claims are in condition for allowance.

The remaining independent claims directed to the present invention are claims 1 and 6. In each claim, there is set forth the limitation of a cone mounted in the outlet passageway and adjacent the fan. In claim 6, the cone is specifically recited as having a bullet shape comprising a circular base and a side wall, further wherein the side wall of the cone has a vertical cross section with a convex curve. Importantly, therefore, both independent claims remaining in the application include a cone. As set forth in the specification of the present application, this cone directs the air flowing from the fan and creates a laminar flow. This laminar flow of air moves the air more efficiently and quietly out of the motor housing, thereby increasing the efficiency and quietness of the motor. The claim limitation of a cone, therefore, is a substantial and substantive claim limitation.

In the Office Action, the Examiner has referred to several portions of the Byrne disclosure as being a teaching of a cone. In the discussion regarding claim

1, the Examiner refers to items 74 and 75 as forming a cone. The discussion of items 74 and 75 is set forth in the Byrne patent at Col. 4, lines 47-62 and Col. 5, lines 3-18. As seen in those portions of the Byrne patent, items 74 and 75 are "ribs 74" and "circular hub member or plate 75." The ribs 74 and hub 75 can not reasonably be characterized as a cone. The Examiner's anticipation arguments based on the disclosure of a cone as embodied in items 74 and 75, therefore, is not supported by the Byrne reference.

With respect to the claim limitation of a cone in claim 6, the Examiner has referred to item 42 in the Byrne patent. Again, this does not appear to be supported. Item 42 is a lobe 42 formed in the front and rear walls of the Byrne pedestal to provide vertical channels for motor brush holders. These lobes 42 are not and can not be referred to as a cone. This basis for the anticipation rejection should be withdrawn.

Not only are the portions of the Byrne reference that are identified to be cones - not cones, there is nothing in the Byrne reference that is a cone. The claimed cone is mounted adjacent the motor fan. In that position, it directs and creates a laminar flow. There is no structure in Byrne that creates this laminar flow. In fact, the air is directed to by the radial fan of Byrne directly outward and into a side wall 68. There is no curvature or other directing of the air as is inherent in a cone structure. There is no suggestion of any cone alternatives in the Byrne reference. In view of the foregoing, the independent claims 1 and 6

each require the existence of a cone in the claimed invention. Byrne does not display or teach a cone. The anticipation rejections of all of the claims should be withdrawn.

The claims 2, 4 and 5 are directed to the shape of the cone. Since there is no cone in Byrne, there is no disclosure of the shape of any cone. Those rejections should be withdrawn.

In addition to the foregoing, it is clear that the Byrne reference also does not teach or otherwise disclose the limitations of dependent claim 3. There is no reference in the Office Action as to exactly how Byrne discloses the teaching of the inlet port and the outlet port having substantially equal cross sections. Further, there is nothing in the Byrne reference that teaches that structure. In fact, the inlet cross section and outlet cross section are never mentioned. They are certainly never mentioned as being equal. Accordingly, the anticipation rejection with respect to claim 3, in addition to the reasons noted earlier herein, should be withdrawn.

In summary, Applicant submits that the Examiner has attributed too much credit to the teachings of the Byrne reference. Nowhere is there disclosed nor taught the use of a cone, much less any structure that will laminate the flow of air off of the motor fan. For this reason alone, the anticipation rejection of all claims must be withdrawn. Also, specifically with respect to claim 3, there is no teaching

with respect to the inlet and outlet cross sections. That rejection must also be withdrawn.

For all the foregoing reasons, Applicant respectfully requests favorable action on the present application.

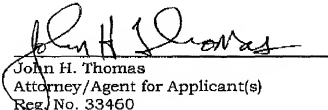
The Commissioner is hereby authorized to charge any deficiencies in payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 50-2127.

Respectfully Submitted,

May 1, 2003

Date

John H. Thomas, P.C.
1561 East Main Street
Richmond, Virginia 23219
Tel. 804 344 8130


John H. Thomas
Attorney/Agent for Applicant(s)
Reg. No. 33460

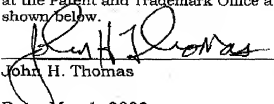
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John H. Thomas

Date: May 1, 2003

1. (Original) A motor housing assembly adapted to contain a motor wherein the motor comprises a fan adapted to cool the motor by drawing air across it, the assembly comprising:

an air inlet port,
a shroud to contain the motor within the housing,
an air inlet passageway defining a path from the inlet port to the motor,
an air outlet port,
an air outlet passageway separated from the inlet passageway and defining a path from the motor to the outlet port, and
a cone mounted in the outlet passageway and adjacent the fan,
whereby air that is exhausted by the fan will flow in a laminar fashion around the cone and through the outlet passageway and outlet port.

2. (Original) A motor housing assembly as described in claim 1, wherein the cone has a frusco-conical shape comprising a circular base, a circular top and a side wall, further wherein the side wall of the cone has a vertical cross-section with a convex curve.

3. (Original) A motor housing assembly as described in claim 1, wherein the inlet port has a first cross-sectional area and the outlet port has a second cross-sectional area and the first and second cross-sectional areas are substantially equal.

4. (Original) A motor housing assembly as described in claim 2, wherein the fan comprises a central hub portion having a circular face and the circular face has substantially the same cross-sectional area as the circular top of the cone.

5. (Original) A motor housing assembly as described in claim 2, wherein the diameter of the fan is larger than the diameter of the circular base of the cone.

6. (Original) A motor housing assembly adapted to hold a motor wherein the motor comprises a fan adapted to cool the motor by drawing air across it, the assembly comprising:

- an air inlet port,
- a shroud adapted to contain the motor within the housing,
- an air inlet passageway defining a path from the inlet port to the motor,
- an air outlet port,
- an air outlet passageway separated from the inlet passageway and defining a path from the motor to the outlet port, and
- a cone mounted in the outlet passageway and adjacent the fan, wherein the cone has a bullet shape comprising a circular base and a side wall, further wherein the side wall of the cone has a vertical cross-section with a convex curve,

whereby air that is exhausted by the fan will flow in a laminar fashion around the cone and through the outlet passageway and outlet port.

7. (Cancelled)

8. (Cancelled)

9. (Original) A motor housing assembly as described in claim 1, wherein the outlet passageway comprises three different turns of at least ninety degrees each.

10. (Original) A motor housing assembly as described in claim 9, wherein the outlet passageway further comprises walls padded with a sound-absorbing material.

11. (Original) A motor housing assembly of claim 9, including a housing having the air outlet port and air inlet port and wherein the air outlet port and air inlet port have substantially the same cross-sectional area.

12. (Cancelled)

13. (Original) A motor housing assembly as described in claim 6, wherein the outlet passageway comprises a plurality of turns totaling at least 270° of direction change.

14. (Original) A motor housing assembly as described in claim 1, wherein the outlet passageway comprises a plurality of turns totaling at least 270° of direction change.